



Virtual reality as a tool for surgical planning

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Abstract

The Corpus Callosum (CC) is the largest commissural bundle with about 100 million fibres connecting the two cerebral hemispheres. It forms a massive arched interhemispheric bridge in the floor of the median longitudinal cerebral fissure. Researches have shown that it is involved in many advanced features of the brain, such as learning, memory, thinking, three-dimensional visual ability, executive functions as well as behavioural patterns. Inconsistencies lie regarding age related changes of Corpus Callosum. Despite rigorous investigations on age-related variations of CC, much controversy still exists in the literature. Morphometric analysis of normal Corpus Callosum is of value in the surgical interventions and stereotactic approaches to the foramen of Munro or third ventricle and in cases of callosotomy for intractable epilepsy. MR imaging is used for preoperative determination of the extent of callosotomy for epilepsy as well as for postoperative evaluation, especially T1 weighted images. Most of the published studies investigated age related CC variations in the western countries and few studies addressed it in any Southeast Asian country like India. Aim: In view of the importance of the dimensions of CC we took up a study to provide reliable results regarding normal morphometry of Corpus Callosum and possible age related variations using magnetic resonance imaging (MRI) data in the North Indian population.

Biography

Stephen Alfrich is the Medical Sales Director for Singular Health in Perth Western Australia. He had 30 years of Medical Sales experience in Neurosurgery, Spine and Navigation with Sofamor Danek, Medtronic and NuVasive.

